CLAIMS

What is claimed is:

1. A dynamoelectric machine comprising:

a stator including a stator winding composed of segmented conductors, said stator winding representative of a first phase stator winding of multi-phase stator windings inserted in a plurality of slots defining said stator; and

a rotor rotatable within said stator, a rotor composed of more than two flux carrying segments, each segment having P/2 claw poles, wherein P is an even number.

2. The machine of claim 1, wherein a coil winding is disposed intermediate each of said more than two flux carrying segments.

3. The machine of claim 2, wherein each coil winding is energized providing a first magnetic polarity on outbound claw poles defining said rotor and a second polarity opposite said first polarity on claw poles intermediate said outbound claw poles.

4. The machine of claim 1, wherein permanent magnets are disposed between said each segment to enhance at least one of output and efficiency.

5. The machine of claim 1, wherein said first phase stator winding includes a conductor segmented into a first segment and a second segment, said first segment is inserted in a first slot of said plurality of slots and said second segment inserted in a second slot of said plurality of slots, said first and second slots having being spaced 180 electrical degrees apart.

6. The machine of claim 5, wherein said first and second segments extend from a first side of said stator to a second side defining said stator, said first segment returns to said first side through said second slot, said second segment returns to said first side through a third slot.

7. The machine of claim 6, wherein said first and second segments form respective loops on said second side before returning to said first side.

8. The machine of claim 6, wherein said third slot is three slots from said second slot and six slots from said first slot with said second slot therebetween.

9. The machine of claim 6, wherein said first and second segments combine after extending to said first side from said second side to form a single conductor.

10. The machine of claim 1, wherein said multi-phase stator windings include three-phase stator windings having said first phase stator winding, a second and a third phase stator winding.

11. The machine of claim 10, wherein each of said plurality of slots is occupied by a respective segmented conductor of one of said first, second, and third phase stator windings.

12. The machine of claim 11, wherein each slot is filled with a plurality of segments from a single phase conductor.

13. An alternating current (AC) generator for a motor vehicle comprising:

a stator including a stator winding composed of segmented conductors, said stator winding representative of a first phase stator winding of multi-phase stator windings inserted in a plurality of slots defining said stator; and

a field rotor rotatable within said stator, said rotor including more than two flux carrying segments, each segment having P/2 claw poles, wherein P is an even number.

14. The generator of claim 13, wherein a coil winding is disposed intermediate each of said more than two flux carrying segments.

15. The generator of claim 14, wherein each coil winding is energized providing a first magnetic polarity on outbound claw poles defining said rotor and a second polarity opposite said first polarity on claw poles intermediate said outbound claw poles.

16. The generator of claim 13, wherein permanent magnets are disposed between said each segment to enhance at least one of output and efficiency.

17. The generator of claim 13, wherein said first phase stator winding includes a conductor segmented into a first segment and a second segment, said first segment is inserted in a first slot of said plurality of slots and said second segment inserted in a second slot of said plurality of slots, said first and second slots being spaced 180 electrical degrees apart.

18. The generator of claim 17, wherein said first and second segments extend from a first side of said stator to a second side defining said stator, said first segment returns to said first side through said second slot, said second segment returns to said first side through a third slot.

19. The generator of claim 18, wherein said first and second segments form respective loops on said second side before returning to said first side.

20. The generator of claim 18, wherein said third slot is three slots from said second slot and six slots from said first slot with said second slot therebetween.

21. The generator of claim 18, wherein said first and second segments combine after extending to said first side from said second side to form a single conductor.

22. The generator of claim 13, wherein said multi-phase stator windings include three-phase stator windings having said first phase stator winding, a second and a third phase stator winding.

23. The generator of claim 22, wherein each of said plurality of slots is occupied by a respective segmented conductor of one of said first, second, and third phase stator windings.

24. The machine of claim 23, wherein each slot is filled with a plurality of segments from a single phase conductor.